6KV6A

Beam Power Tube

NOVAR TYPE

For High-Voltage-Pulse Shunt-Regulator Applications in Color-TV Receivers

ELECTRICAL CHARACTERISTICS – Bogey Values

Heater Voltage, ac or dc. . .	E_h	6.3	V
Heater Current	I_h	1.6	A
Direct Interelectrode Capacitances:[a]			
Grid No.1 to plate.	c_{g1-p}	0.6	pF
Input: G1 to (K,G3,G2,H). .	c_i	22	pF
Output: P to (K,G3,G2,H). .	c_o	9.0	pF

For the following characteristics, see Conditions below.

Amplification Factor (Triode Connection)[b]	μ	-	4	-	
Plate Resistance (Approx.).	r_p	-	-	10000	Ω
Transconductance	g_m	-	-	6000	μmho
DC Plate Current	I_b	440[c]	-	40	mA
DC Grid-No.2 Current	I_{c2}	30[c]	-	2.4	mA
Cutoff DC Grid-No.1 Voltage for I_b = 1 mA . . .	$E_{c1(co)}$	-	-	-42	V

Conditions:

Heater Voltage	E_h	Bogey Value			V
DC Plate Voltage	E_b	100	140	140	V
DC Grid-No.3 Voltage . . .	E_{c3}	0	0	0	V
DC Grid-No.2 Voltage . . .	E_{c2}	140	140	140	V
DC Grid-No.1 Voltage . . .	E_{c1}	0	-24.5	-24.5	V

MECHANICAL CHARACTERISTICS

Dimensional Outline . . . . JEDEC No.12-97
Maximum Overall Length . . . . 3.380 in. (85.85 mm)
Maximum Seated Length. . . . . 3.000 in. (76.2 mm)
Maximum Diameter . . . . 1.562 in. (39.6 mm)
Envelope . . . . JEDEC Designation T12
Base[d] . . . . Large-Button Novar 9-Pin with Exhaust Tip (JEDEC Designation E9-88)

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Terminal-Connections Designation . . . . .JEDEC 9QU
Type of Cathode . . . . Coated Unipotential
Operating Position . . . . Any

MAXIMUM RATINGS – Design-Maximum Values[e]

For operation as a High-Voltage-Pulse Shunt-Regulator Tube in Color Television Receivers in a 525-line, 30-frame system.

DC Plate Supply Voltage (I_b = 0 mA)	E_{bb}	900	V
Peak Positive-Pulse Plate Voltage	e_{bm}	6500	V
Peak Negative-Pulse Plate Voltage	$-e_{bm}$	1500	V
DC Grid-No.3 Voltage	E_{c3}	75	V
DC Grid-No.2 (Screen-Grid) Voltage	E_{c2}	220	V
Peak Positive-Pulse Grid-No.2 Voltage	e_{c2m}	600	V
Grid No.1 (Control-Grid) Voltage:			
Peak negative-pulse value	$-e_{c1m}$	330	V
Negative dc value (bias)	$-E_{c1}$	250	V
Heater-Cathode Voltage:			
Peak	e_{hkm}	+200 / -500	V
Average[g]	$E_{hk(av)}$	100	V
Heater Voltage	E_h	5.7 to 6.9	V
Cathode Current:			
Peak	i_{km}	950	mA
Average[g]	$I_{k(av)}$	275	mA
Grid-No.2 Input	P_{g2}	2.0	W
Plate Dissipation[h]	P_b	28[k]	W
Envelope Temperature (at hottest point on envelope surface)	T_E	240	°C

MAXIMUM CIRCUIT VALUE

Grid-No.1-Circuit Resistance:	$R_{g1(ckt)}$		
For grid-No.1-resistor-bias operation		1	MΩ

[a]Measured without external shield in accordance with the current issue of EIA Standard RS-191.

[b]With grid No.3 and grid No.2 connected, respectively, to cathode and plate at socket.

[c]This value can be measured by a method involving a recurrent waveform such that the Maximum Ratings of the tube will not be exceeded.

[d]Designed to mate with "Novar 9-Contact" Socket generally available from your local RCA Distributor.

[e]As defined in the current issue of EIA Standard RS-239.

[f]This rating is applicable where the duration of the voltage pulse does not exceed 15% of one horizontal scanning cycle. In a 525-line, 30-frame system, 15% of one horizontal scanningcycle is 10μs.

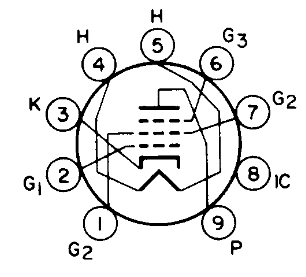
[g]Measured with a dc meter.

[h]Adequate circuit precautions must be taken to protect the tube in the absence of grid-No.1 bias.

[k]Plate dissipations up to 32W maximum are permissible for short periods of time provided the maximum envelope-temperature rating is not exceeded. This condition may exist under high-line voltage, zero picture tube beam current.

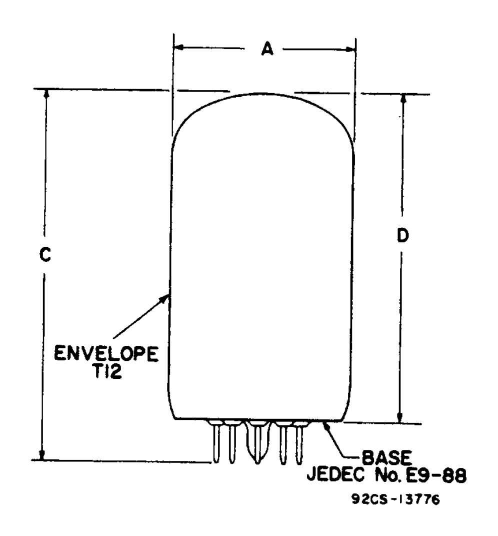
TERMINAL DIAGRAM — Bottom View

Pin 1 - Grid No.2
Pin 2 - Grid No.1
Pin 3 - Cathode
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Grid No.3
Pin 7 - Grid No.2
Pin 8 - Do Not Use
Pin 9 - Plate



JEDEC 9QU

DIMENSIONAL OUTLINE — JEDEC No. 12-97



DIMENSION	INCHES		MILLIMETERS	
	Min.	Max.	Min.	Max.
A	1.438*	1.562	36.6*	39.6
C	–	3.380	–	85.85
D	2.750	3.000	69.9	76.2

MILLIMETER DIMENSION DERIVED FROM INCH DIMENSION

* Applies to the minimum diameter except in the area of the seal.